

Application No.: 09/763,511
Amendment dated October 29, 2003
Reply to Office Action of July 29, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1(Withdrawn): A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member, wherein the one characteristic is average fibre length, comprising the steps of:

- causing sound to be transmitted through the solid wood member;
- determining the velocity of the transmitted sound through the solid wood member; and
- predictively assessing a measure of the average fibre length of wood fibre or wood pulp to be produced from the solid wood member by reference at least in part to the determined sound velocity through the solid wood.

Claim 2 (Withdrawn): A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member, comprising the steps of:

- causing a sound wave to be transmitted through the solid wood member;
- determining the velocity of the sound wave through the solid wood member; and
- comparing the determined sound wave velocity to stored information on at least one fibre characteristic versus sound velocity through the wood-type to determine at least in part said at least one fibre characteristic for wood pulp or wood fibre to be produced from the solid wood member.

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Claim 3 (Withdrawn): A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member having one end and another end longitudinally spaced from the one end along the length of the solid wood member, wherein the one characteristic is average fibre length, comprising the steps of:

placing a sensing means capable of detecting sound in the solid wood member in contact with or within sensing distance of one end of the length of the solid wood member;

placing a second sensing means capable of detecting sound in the solid wood member in contact with or within sensing distance of another end of the length of the solid wood member,

causing a sound wave to be transmitted in the length of the solid wood member from one end to the other end;

detecting the sound at each end of the length of the solid wood member via the sensing means and determining the velocity of the transmitted sound in the wood; and

predictively assessing a measure of average fibre length of wood fibre or wood pulp to be produced from the solid wood member by reference to stored information on average fibre length versus sound velocity through the wood.

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Claim 4 (Withdrawn): A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member having one end and another end longitudinally spaced from the one end along the length of the solid wood member, wherein the characteristic is average fibre length, including the steps of:

placing means capable of detecting both an original and a reflected sound wave in contact with or within sensing distance of one end of a length of a solid wood member;
causing a sound wave to be transmitted in the length of the solid wood member;
detecting a reflected echo of the sound wave in the solid wood member;
determining the velocity of the sound wave in the solid wood member; and
predictively assessing a measure of average fibre length of wood fibre or wood pulp to be produced from the solid wood member at least in part by reference to stored information on average fibre length versus sound velocity through the wood.

Claim 5 (Withdrawn) A method according to claim 1, wherein the solid wood member has a length and at least one end, wherein the step of causing a sound to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

Claim 6 (Withdrawn) A method according to claim 1 wherein the fibre characteristic is a measure of the strength of the pulp formed from the wood.

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Claim 7 (Withdrawn) A method according to claim 1 wherein the fibre characteristic is a measure of the strength of the wood.

Claim 8 (Withdrawn): A method of segregating solid wood members for use in pulp and paper or fibre board production including determining a measure of average fibre length of individual solid wood members using the method of claim 1.

Claim 9 (Currently Amended): Apparatus for predictively assessing ~~at least one characteristic a~~ measure of the average fibre length of wood fibre or wood pulp to be produced from a solid wood member, comprising:

a sensor capable of detecting the velocity of a sound wave through a solid wood member along the length thereof; and

a computer comprising stored information on ~~at least one fibre characteristic~~ fibre length of produced wood fibre or wood pulp versus sound velocity through wood and arranged to determine ~~the at least one fibre characteristic~~ a measure of average fibre length for the wood fibre or wood pulp to be determined by reference to said stored information on ~~the at least one fibre characteristic~~ fibre length versus detected velocity through the solid wood member.

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Claim 10 (Currently amended): Apparatus for predictively assessing ~~at least one characteristic a~~
measure of average fibre length of wood fibre or wood pulp to be produced from a solid wood
member, comprising:

a sensor capable of detecting both an original and a reflected sound wave in a solid wood
member along the length thereof; and
a computer comprising stored information on fibre ~~characteristic~~ length of produced
wood fibre or wood pulp versus sound velocity through wood and arranged to
determine ~~the at least one fibre characteristic~~ a measure of average fibre length for
the wood fibre or wood pulp to be produced by reference to said stored
information on ~~the at least one fibre characteristic~~ fibre length versus detected
velocity through the solid wood member.

Claim 11 (Previously amended): Apparatus according to claim 9 arranged to determine a
measure of the average fibre length of wood fibre to be produced from a solid wood member.

Claim 12 (Previously amended): Apparatus according to claim 9 arranged to determine a
measure of strength of pulp to be produced from a solid wood member.

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Claim 13 (Withdrawn): A method according to claim 2, wherein the solid wood member has a length and at least one end, wherein the step of causing a sound wave to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

Claim 14 (Withdrawn): A method according to claim 2, wherein the fibre characteristic is a measure of average fibre length.

Claim 15 (Withdrawn): A method according to claim 2, wherein the fibre characteristic is a measure of the strength of pulp formed from the wood.

Claim 16 (Withdrawn): A method according to claim 3, including the step of cause a sound wave to be transmitted through the wood by impacting one end of the length of the solid wood member.

Claim 17 (Withdrawn): A method according to claim 3, wherein the fibre characteristic is a measure of the average fibre length.

Claim 18 (Withdrawn): A method according to claim 3, wherein the fibre characteristic is a measure of the strength of the pulp formed from the wood.

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Claim 19 (Withdrawn): A method according to claim 4 wherein the step of causing a sound wave to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

Claim 20 (Withdrawn): A method according to claim 4, wherein the fibre characteristic is a measure of the average fibre length.

Claim 21 (Withdrawn): A method according to claim 4, wherein the fibre characteristic is a measure of the strength of the pulp formed from the wood.

Claim 22 (Withdrawn): A method according to claim 5, wherein the fibre characteristic is a measure of the average fibre length.

Claim 23 (Withdrawn): A method according to claim 5, wherein the fibre characteristic is a measure of the strength of the pulp formed from the wood.

Claim 24 (Withdrawn): A method according to segregating wood for use in pulp and paper or fibre board production including determining one or more fibre characteristics of the individual lengths of wood using the method of claim 2.

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Claim 25. (Withdrawn): A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 2.

Claim 26 (Withdrawn) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining the average fibre length of individual solid wood members using the method of claim 3.

Claim 27 (Withdrawn): A method of segregating solid wood members for use in pulp and paper or fibre board production including determining the average fibre length of individual solid wood members using the method of claim 4.

Claim 28 (Withdrawn) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining the average fibre length of individual solid wood members using the method of claim 5.

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Claim 29 (Previously amended) Apparatus for predictively assessing at least one characteristic of wood fibre or wood pulp to be produced from a solid wood member, wherein the characteristic is average fibre length, comprising:

a sensor capable of detecting both an original and a reflected sound wave in a solid wood member along the length thereof; and
a computer comprising stored information on fibre characteristics versus sound velocity through wood and arranged to determine a measure of the average fibre length of wood fibre to be produced from the solid wood member by reference to said stored information on the average fibre length versus detected sound velocity through the solid wood member.

Claim 30 (Cancelled).

Claim 31 (Withdrawn): A method as set forth in claim 1, including the steps of selecting solid wood members for use as raw material in the production of wood pulp or wood fibre based on the assessment and producing wood pulp or wood fibre from the selected solid wood members.